



7818 DEPOT LANE, TAMPA, FL 33637

FOR 24 HOUR EMERGENCY: CALL CHEM-TEL 1-800-255-3924

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C.A.S. NO.: 7664-38-2

REVISION DATE: October 10, 2007

MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

TRADE NAME: Phosphoric Acid Cleaner

SYNONYMS: Orthophosphoric Acid, Monophosphoric Acid

DOT SHIPPING NAME: Phosphoric Acid

LABEL REQUIRED: Corrosive

DOT/UN ID NO.: UN 1805

DOT CLASS: 8

PACKING GROUP: III

2. COMPOSITION AND INFORMATION ON INGREDIENTS

MATERIAL	OSHA PEL/STEL	ACGIH TLV/TWA	TLV/STEL	TLV
Phosphoric Acid	3 mg/m ³	1 mg/m ³	3 mg/m ³	

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Liquid is corrosive (causes burns) to eyes and skin, mist produces irritation to eyes, nose, throat and lungs. Use water to keep fire-exposed containers cool. Oxides of phosphorus are formed during thermal decomposition.

POTENTIAL HEALTH EFFECTS: Causes sensory irritation; contact of the tissues with phosphoric acid also causes corrosive burns. The mist causes mild irritation of eyes, throat and skin.

4. FIRST AID MEASURES

SKIN: Immediately remove contaminated clothing and wash with soap and water. If irritation persists, obtain medical attention.

EYE: Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids intermittently. See a physician or ophthalmologist.

INGESTION: Rinse mouth with water. Do not induce vomiting. See a physician immediately.

INHALATION: Remove to fresh air. If breathing discomfort occurs, call a physician.

5. FIRE FIGHTING MEASURES

FLASH POINT: Non Combustible.

FLAMMABLE LIMITS: Not Applicable.

EXTINGUISHING MEDIA: Use water spray to keep fire-exposed containers cool. Extinguish fire using agent suitable for surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURE: Not combustible. Evolves hydrogen on contact with most metals.

UNUSUAL FIRE EXPLOSION HAZARD: None Known.

AUTO IGNITION TEMPERATURE: Not Applicable.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of phosphorus.

6. ACCIDENTAL RELEASE MEASURES

Approach release from upwind. Stop or control leak using special protective clothing and positive pressure self-contained breathing apparatus. Control runoff and isolate discharged material for proper disposal.

7. HANDLING AND STORAGE

Store in plastic, rubber lined, or 316 stainless steel tanks designed for Phosphoric Acid. Store containers away from heat and out of direct sunlight.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

RESPIRATORY PROTECTION: Use approved acid/gas cartridge or canister with full facepiece unless break-through occurs, then use airline supplied or self-contained breathing apparatus with full facepiece.

VENTILATION REQUIREMENTS: Ventilate as necessary to prevent release of mist into the work area.

EYE PROTECTION: Use cup type chemical goggles. Full face shield may be used.

SKIN PROTECTION: Rubber or neoprene gloves, footwear and aprons or full protective clothing depending on degree of exposure.

9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 130 - 158° C.

VAPOR PRESSURE (MM Hg): 8 - 2 MM Hg @ 25° C.

VAPOR DENSITY (AIR = 1): Non Volatile.

SPECIFIC GRAVITY (H₂O = 1): 1.5 - 1.7.

DENSITY (G/ML): 1.3 - 1.7 depending on concentration.

PERCENT VOLATILE BY VOLUME (%): Not Applicable.

MELTING POINT: 32° C.

EVAPORATION RATE (Butyl Acetate = 1): Not Applicable.

SOLUBILITY IN WATER: No Data.

pH: 1% Solution 1.7

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal temperature and pressure.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of phosphorus.

KEEP AWAY FROM: Alkaline materials and reactive metals. Contact with reactive metals (e.g. mild steel and aluminum) may produce flammable/explosive hydrogen-air mixtures. Reacts with strong bases.

11. TOXICOLOGICAL INFORMATION

EYE CONTACT: Corrosive (Rabbit) Ref: J. Amer. Coll. of Toxicol., 1990.

SKIN CONTACT: Non-Corrosive (4 hr) (Rabbit) Ref: J. Amer. Coll. of Toxicol., 1(1):68, 1990.

SKIN ABSORPTION: LD₅₀>1260 MG/KG (Rat) Ref: J. Amer. Coll. of Toxicol., 1990.

INHALATION: No Data Available.

INGESTION: LD₅₀ = 3500 MG/KG (Rat).

ACUTE EFFECTS FROM OVEREXPOSURE: Phosphoric acid has low acute oral and moderate dermal toxicity. It is corrosive to eyes. Slightly toxic when inhaled.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: Inorganic phosphates in contact with soil, sub-surface waters may be taken up by plants and utilized as essential nutrients. Phosphates may also form precipitates, usually with calcium or magnesium. The resultant compounds are insoluble in water and become a part of the soil or sediment. The term biodegradability, as such, is not applicable to inorganic materials.

ENVIRONMENTAL EFFECTS: Aquatic toxicity data (for sodium phosphates) 96 HR LC50>100 MG/L, non-toxic (rainbow trout, inland silversides and mysid shrimp) FMC studies I89-1085, -1086 & -1087; 48 HR EC50.100 MG/L, non-toxic (Daphnia Magna) FMC study I89-1088.

13. DISPOSAL CONSIDERATIONS

Soda ash and lime may be used as neutralizing agents for materials that cannot be salvaged. Neutralized liquid may be discharged to treatment in accordance with regulatory procedures.

14. TRANSPORTATION INFORMATION

DOT SHIPPING NAME: Phosphoric Acid.
TECHNICAL SHIPPING NAME: Phosphoric Acid.
DOT HAZARD CLASS: 8
UN/NA NUMBER: UN 1805
PACKING GROUP: III
PRODUCT RQ (lbs): 5000 lbs.
DOT LABEL: Phosphoric Acid, 8, UN 1805, III
DOT PLACARD: Corrosive
PRODUCT LABEL: Corrosive

15. REGULATORY INFORMATION

This product is on the TSCA Inventory.

SARA TITLE III Information:

Section 302 Extremely Hazardous Substance: Unlisted.

Section 313 Toxic Chemicals: Phosphoric Acid.

Section 311/312 Hazard Category: Immediate (acute) Health Hazard.

16. OTHER INFORMATION

	HEALTH	FLAMMABILITY	REACTIVITY	SPECIAL HAZARD
NFPA 704	2	0	0	None

(Degree of hazard: 0 = No Hazard, 4 = Severe Hazard)

USERS RESPONSIBILITY: A bulletin such as this cannot be expected to cover all possible individual situations. As the user has the responsibility to provide a safe workplace, all aspects of an individual operation should be examined to determine if, or where, precautions - in addition to those described herein - are required. Any health hazard and safety information herein should be passed on to your customers or employees, as the case may be.

DISCLAIMER OF LIABILITY: The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. All chemicals may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Final determination of suitability of the chemical is the sole responsibility of the user. No representations or warranties, either expressed or implied, of merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to the information contained herein or the chemical to which the information refers. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.

< = Less Than

> = More Than

N/A = Not Applicable

ND = Not Determined

